

was in flower July 14, 1948. Plants are not so numerous, but are scattered over the area, and seem to be established.

Plants of both species have been sent to the Gray Herbarium.—
EDWIN D. HULL, Gary, Indiana.

ZOOCHLORELLA CONDUCTRIX OCCURRING IN NEW BRUNSWICK SYMBIOTICALLY WITH OPHRYDIUM

HERBERT HABEEB AND JOHN J. CALDWELL

WHILE collecting Algae in the ledge-pools near the falls at Grand Falls, New Brunswick, one pool was found to contain delicate, green, jelly-like balls and clouds of what appeared macroscopically to be another member of *Tetrasporaceae*. On microscopic examination the specimens proved to be an infusorian with an included alga. They were identified as respectively, *Ophrydium* sp. (probably *versatile*) and *Zoochlorella conductrix* Brandt.

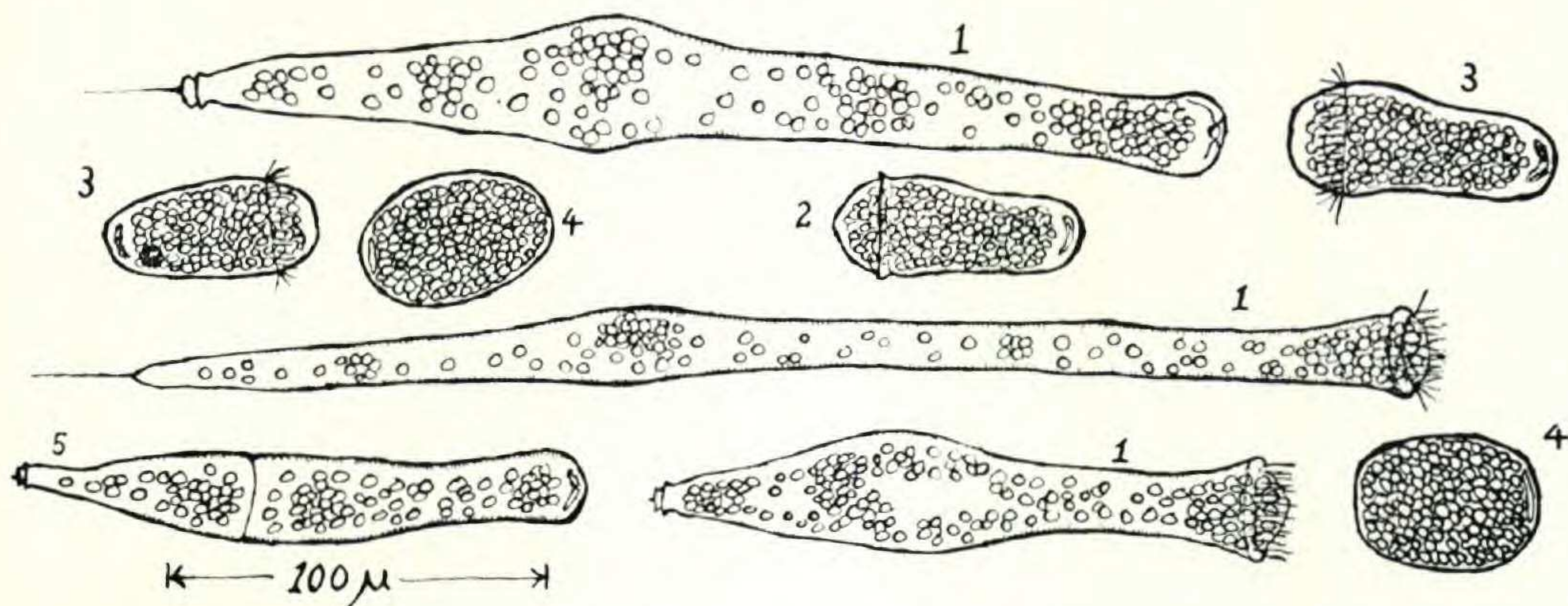
F. S. Collins in the *Green Algae of North America* (Tufts College Studies. Scientific series. **2**: 79–480. 1909) lists two species of *Zoochlorella* and separates them as follows:

Cells 3–6 microns diameter.....*Z. conductrix*
Cells 1.5–3 microns diameter.....*Z. parasitica*

Collins also mentions that *Z. conductrix* occurs in tissues of *Hydra* and allied freshwater organisms, while *Z. parasitica* Brandt occurs in tissues of *Spongilla*, in *Ophrydium* and in other freshwater organisms.

Measurements show that the *Zoochlorella* in our specimens average about 5 microns in diameter; placing the alga in *Zoochlorella conductrix*. This seems to indicate that the differences between *Z. conductrix* and *Z. parasitica* are slight or that *Ophrydium* is impartial as a host.

The *Ophrydium* stretched out in action measured up to 350 microns in length, the narrowest part of the neck, as small as 20 microns in diameter, while the thickest part of the body measured up to 43 microns in diameter. The colonies grew to a diameter of 10 cm. and were free-floating or on the bottom of the pool, depending on oxygen production. As we are unable to determine the *Ophrydium* down to species, figures are appended for future reference.



UNIDENTIFIED OPHRYDIUM

Specimens numbered *Habeeb* 10585 and 10743 are deposited in the Cryptogamic Herbarium, Chicago Natural History Museum and in the collections of Herbert Habeeb. The Cryptogamic Herbarium, Chicago Natural History Museum, will distribute the duplicates.

It may be of interest to note that *Zoochlorella parasitica* has been reported from southern Quebec by C. W. Lowe in the Proceedings and Transactions of the Royal Society of Canada. III, 31 (sV): 291–316. 1927. Dr. Francis Drouet informed us that there are specimens labelled *Z. parasitica* in the Cryptogamic Herbarium, Chicago Natural History Museum, from our general vicinity. MAINE: edge of Wood's Pond, vicinity of Blue Hill, Hancock Co., *Wm. R. Maxon* 11235, 25 Aug. 1946. QUEBEC: small woodland pond, west branch of Mont Louis River, *M. L. Fernald*, *C. W. Dodge*, and *L. B. Smith* 2250, 30 July 1923.

GRAND FALLS, NEW BRUNSWICK.

AN ABBREVIATED FLORA OF MAINE.—The Josselyn Botanical Society of Maine has just issued a very handy Check-list of the Vascular Plants of Maine¹. "Responsibility for the groups included are: Steinmetz for the grasses and sedges, Hyland for the woody plants, Edith B. Ogden for the ferns, and Ogden for the other groups." Such a division of responsibility leads, naturally, to different standards and divergent treatments. What some would call distinct others, with different outlook, will not; groups which some admit others, in parallel cases, exclude. For instance, "Plants now

¹ E. C. OGDEN, STEINMETZ, F. H. AND HYLAND, F. Check-list of the Vascular Plants of Maine. Josselyn Bot. Soc. Me., Bull. no. 8. 70 pp., Orono, Me., August, 1948. To be obtained for 50c from DR. F. H. STEINMETZ, Coburn Hall, Univ. of Me., Orono, Maine.